

```

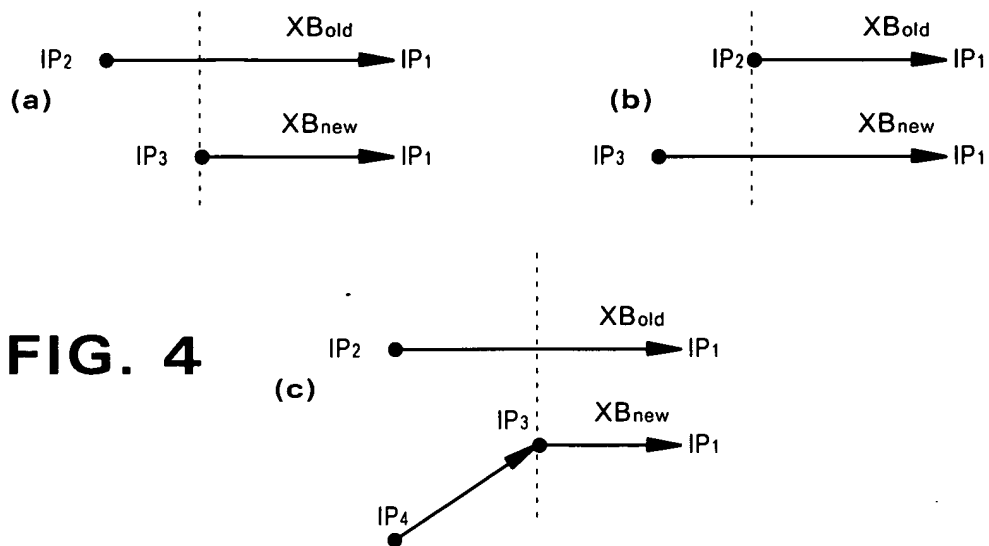
graph TD
    1010{{CAN TERMINAL IP ADDRESS BE PREDICTED? 1010}}
    1020[PREDICT TERMINAL IP ADDRESS OF NEXT BLOCK 1020]
    1030{{DOES PREDICTED ADDRESS HIT CACHE? 1030}}
    1040[RETRIEVE BLOCK AND PASS TO EXECUTION 1040]
    1050[RETRIEVE INST. FROM INST. CACHE 1050]
    1060[BUILD NEW BLOCK; PASS TO EXECUTION 1060]
    1070{{DOES ADDRESS OF TERM. INST. HIT CACHE? 1070}}
    1080[STORE NEW BLOCK IN CACHE 1080]
    1090{{IS NEW BLOCK SUBSUMED WITHIN OLD BLOCK? 1090}}
    1100{{IS OLD BLOCK SUBSUMED WITHIN NEW BLOCK? 1100}}
    1110[EXTEND OLD BLOCK TO INCLUDE REMAINDER OF NEW BLOCK 1110]
    1120[STORE PORTION OF NEW BLOCK IN CACHE 1120]
    1130[CREATE COMPLEX BLOCK 1130]
    1140[UPDATE XBTB 1140]

    1010 -- YES --> 1020
    1010 -- NO --> 1050
    1020 --> 1030
    1030 -- YES --> 1040
    1030 -- NO --> 1050
    1040 --> 1140
    1050 --> 1060
    1060 --> 1070
    1070 -- NO --> 1080
    1070 -- YES --> 1090
    1080 --> 1140
    1090 -- YES --> 1140
    1090 -- NO --> 1100
    1100 -- YES --> 1110
    1100 -- NO [BLOCKS HAVE DIFFERENT PREFIXES] --> 1120
    1110 --> 1140
    1120 --> 1140
    1120 -.-> 1130
    1130 --> 1140
    1140 --> 1010

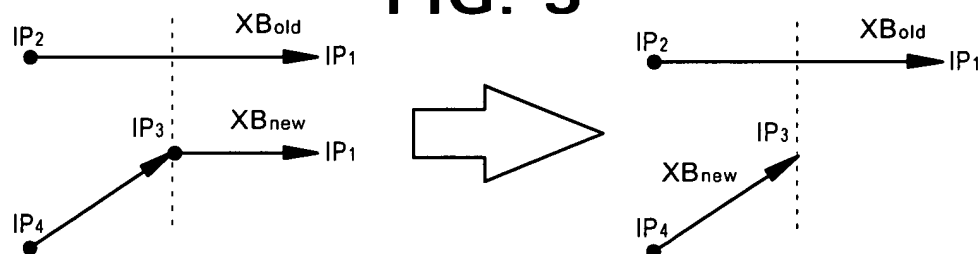
```

**FIG. 3**  
1000

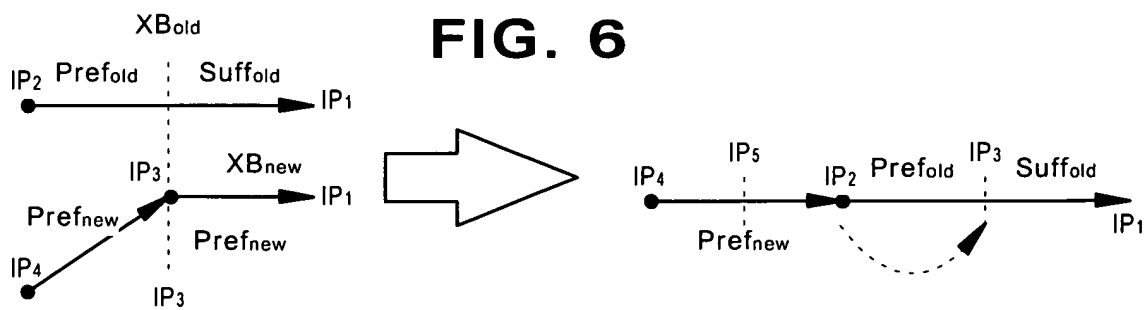




**FIG. 4**



**FIG. 5**



**FIG. 6**



[illegible]